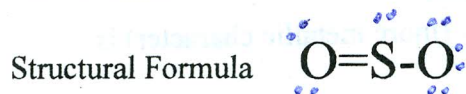


Structure Table

SO ₂	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	3 atoms x 8 electrons each	(1 sulfur x 6 electrons) + (2 oxygens x 6 electrons)	(24 - 18)/2
Answer	24	18	3

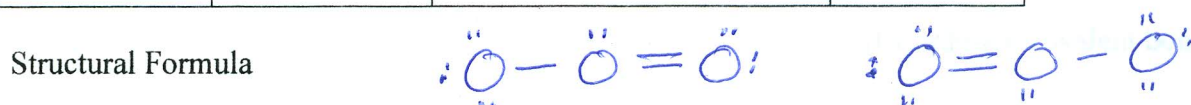


Fill in the tables and draw the Lewis formula for the following compounds

CO	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	2 x 8	4 + 6	16 - 10 / 2
Answer	16	10	3

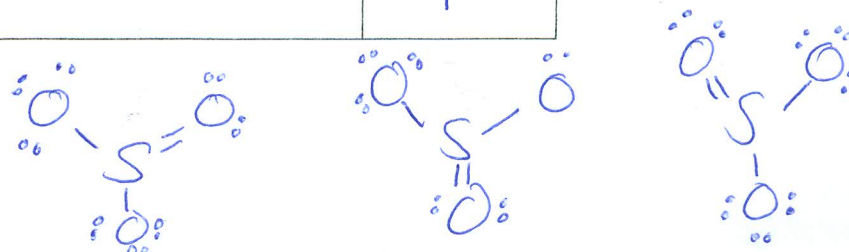


O ₃	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	3 x 8	3 x 6	24 - 18 / 2
Answer	24	18	3



SO ₃	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	4 x 8 =	4 x 6	32 - 24 / 2
Answer	32	24	4

Structural Formula



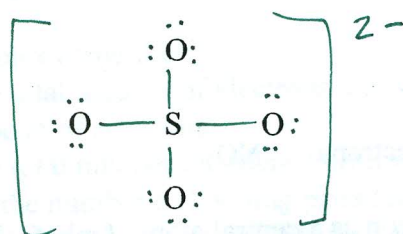
Lewis Structures of Polyatomic Ions

- Follow the same procedure as you do for complex molecular compounds, except add a number of valence electrons equal to the charge on the ion to the total number of valence electrons in the compound (for positive ions subtract the number of electrons equal to the charge number)

Example SO_4^{2-}

SO_4^{2-}	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	5 atoms x 8 electrons each	(1 sulfur x 6 electrons) + (4 oxygens x 6 electrons) + 2 gained electrons	(40 - 32)/2
Answer	40	32	4

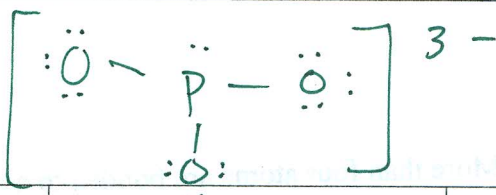
Structural Formula



Fill in the tables and draw the Lewis formula for the following compounds

PO_3^{3-}	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	4×8	$5 + (3 \times 6) + 3$	$32 - 26 / 2$
Answer	32	26	3

Structural Formula



NO_2^-	Total Electrons	Valence Electrons	Bonding Pairs
Calculation	3×8	$5 + (2 \times 6) + 1$	$24 - 18 / 2$
Answer	24	18	3

Structural Formula

